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THE MONTANA ROUNDUP

OF INDUSTRIAL HEALTH BRIEFS

Montana State Board of Health
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MANGANESE POISONING

Chronic manganese poisonings have been reported from all types of industries in which there has been a high exposure to manganese, including the mining of manganese ores, crushing, grinding and separating, dry cell battery manufacturing, iron and steel manufacturing, chemical industries, electric welding, and handling of ores by stevedores. It is often considered that manganese dioxide gives rise to the more pertinent health hazard but there is no established evidence to eliminate manganese in any form from the hazardous list when it is encountered in a concentration in excess of 6 milligrams per cubic meter of air for an 8-hour daily exposure.

Chronic manganese poisoning in many instances appears to progress after removal from the exposure and, although rarely fatal, severe cases nearly always suffer life-long crippling incapacity. The chief early indicative factor is apparently the presence of manganese in the urine and minor muscular disturbances in speech and gait.

The occurrence of industrial manganese poisoning have been recorded and recognized since 1837; industry, therefore, has had 110 years to establish safe methods of handling this material so that no new cases should occur, but like so many other types of industrial health hazards, new cases continue to occur.

Manganese hazards, like all other hazards, can be controlled. Evaluation and methods of control for manganese hazards as well as all other industrial hygiene hazards can be made free of charge by your State Industrial Hygiene Department.

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AN INEFFICIENT MACHINE IS COSTLY.

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INDUSTRIAL HYGIENE AND LABOR TURNOVER

In recent years, management has become increasingly aware that the physical and mental health of the employee is an important ingredient of industrial productivity. With this realization has come the desire to do something about maintaining the highest possible health standards among these workers.

The investment of time and money in such a program yields manifold dividends in better employee-management relationship, greater productive efficiency, lower percentage of labor turnover, and actual cash savings.

To be successful, such a program must be based upon a knowledge of working conditions and the main factors contributing to disabilities. A statistical study of the labor turnover in a plant may reveal the relative importance of the various causes for it. It may also point out any unduly high incidence of disability in a given department. Such information may then be followed by a detailed study of that department to discover and eliminate the cause of the excessive disabilities.

A fact that is seldom recognized by industrial management is the much greater time loss due to non-occupational illness, and it is now fairly well established that the lost time and incapacity due to sickness among workers constitute one of the most important problems in industrial hygiene and is also an important factor in the desire of a worker to change jobs, as working conditions may be an indirect cause of much so-called "non-occupational"illness. It is in the interest of the employer to ascertain whether or not the rate of sickness in his establishment is high or low or normal and to know what conditions may cause ill health among his employees. Therefore, current information as to the relationship of sickness to the working environment in certain departments and occupations is essential for correct determination of the causes of illness and labor turnover so that preventive measures may be designed.

Where labor turnover is a serious or increasing problem, a program to locate and control the cause of the increase should be the first step. Appropriate records for the determination of where, when, and under what conditions the losses are occurring, are effective means of accurately measuring the problem.

The Industrial Hygiene Department of Montana is set up to assist management in the location and causes of illness-absenteeism and/or high percentages of labor turnover. Several of the most progressive plants in the state are now making use of this service and it is available to all industry.

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THE EFFICIENCY OF A MACHINE IS MAINTAINED BY THE HEALTH OF IT'S OPERATOR!

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NUTRITION IN INDUSTRY

Employers are interested in efficient production of goods and services because it means good business. The health of individual workers in any industrial plant is one of the most important factors in securing efficiency and skill on the job.

Food is one of the first things needed for good health. It is agreed that proper rest and sleep, exercise, fresh air and sunshine are important to maintain good health but eating the right kinds of food is one of the most important health habits.

Some employers have had surveys made to determine the amount of work done at various hours during the working day. It has been found that there is a "slump" or decline in amount of work done around eleven o'clock in the morning and three-thirty in the afternoon. When the workers were questioned and types of meals were checked, it was usually found that the lowered amount of work was done by those who had poor breakfasts or lunches.

A survey in one mid-west war plant showed that 27.6% of the workers had no breakfast, 13.5% had poor breakfasts, 34.1% had fair breakfasts, 21.2% had good breakfasts, and only 3.5% had complete breakfasts.

It is not necessary to count calories or vitamins to obtain a good diet. It is more important to understand the purposes of the different kinds of foods and to choose them carefully. It is also important that the foods be prepared properly to make them look attractive and contribute the greatest amount of food value to the meal.

Any person who does not need a special diet, or is not receiving instruction from his physician concerning his food needs, can be sure of adequate food for the three meals each day if he selects them from the seven basic food groups:

Group 1. Green and yellow vegetables - one large serving each day.

Group 2. Oranges, tomatoes, grapefruit or raw cabbage or raw greens - one serving each day.

Group 3. Potatoes and other vegetables and fruits - one or more potatoes - two servings of others each day.

Group 4. Milk and milk products - as a beverage or in cooked foods - adults - one pint each day; children - three-fourths to one quart.

Group 5. Meat, poultry, fish, eggs - one serving meat, poultry or fish, one egg (at least four a week) - dried beans, peas, nuts or peanut butter.

Nutrition in Industry Cont'd from Page 3.

Group 6. Bread, flour and cereals, enriched or whole grain - two slices of bread or its equivalent at each meal.

Group 7. Butter and fortified margarine (Vitamin A added to margarine) - two to three tablespoons each day.

For growing children, additional Vitamin D is important - 400 U.S.P. units daily in some form.

Good nutrition pays dividends in good health and efficient, alert workers. --Alda Torgerson, Nutrionist, Montana State Board of Health.

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MEASUREMENT AND CONTROL OF X-RAY RADIATION

Your Industrial Hygiene Division is now equipped to take accurate measurements and complete evaluation of health hazards arising from exposure to X-ray radiation.

It has been definitely established that excessive exposure to X-ray causes changes to take place in the blood, lymphatic tissues, and bone marrow; sterility may also occur. Acute X-ray dermatitis is reputed to occur more often to the patient than to the physician or the roentgenologist but instances are known in which they too have contracted an acute or chronic X-ray dermatitis.

The Committee on Physics of the National X-Ray Societies have recommended that 0.1 r (roentgen) be considered as the daily tolerance dose.

Control of exposure to X-ray radiation can be accomplished through the construction of adequate lead shields and the intelligent use of these safeguards after their installation.

The Industrial Hygiene Division is anxious to assist any individual or organization using X-ray, fluoroscope or any radio-active materials by a thorough study and complete evaluation of the health hazard involved.

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HAVE YOU HAD

AN INDUSTRIAL HYGIENE SURVEY

OF YOUR PLANT TO LOCATE CAUSES OF

OCCUPATIONAL ILLNESSES WHICH ARE

AFFECTING PRODUCTION COSTS?